

Amendments to the Specification:

Please replace the paragraph beginning on page 3, line 21, with the following amended paragraph:

C1 The host system periodically transmits a request to the signal conditioner for the authentication data. In a preferred embodiment, the host system and signal conditioner communicate using a ~~Modbus~~[™] MODBUS[™] protocol or HART[™] protocol. The signal conditioner receives the request and reads the identification and calibration data. The identification and calibration data are then transmitted to the host system.

Please replace the paragraph beginning on page 6, line 6, with the following amended paragraph:

C2 FIG. 1 illustrates a block diagram of a host system 100 and a signal conditioner 110 that incorporate the tamper proof system of this invention. Host system 100 includes a power supply 101 and a processing unit 102. Power supply 101 supplies the power needed to processing unit 102. Power supply 101 also supplies power to signal conditioner 110 via path 103. Processing unit 102 receives parameter signals from signal conditioner 110 and provides a parameter to user via path 26 and a secondary device. Processing unit 102 communicates with signal conditioner 110 via path 104 to receive the parameter signals and execute applications in accordance with this invention. In order to communicate, processing unit 102 and signal conditioner 110 may use any known protocol. Two exemplary protocols are HART[™] and ~~Modbus~~[™] MODBUS[™].

Please replace the paragraph beginning on page 7, line 10, with the following amended paragraph:

Q3 I/O bus 210 connects CPU 201 to a plurality of peripheral devices. CPU 201 receives and transmits data to the peripheral devices via I/O bus 210. The peripheral devices connected to I/O bus 210 include, but are not limited to, display 220, ~~input~~ I/O device 230, network interface 240, and non-volatile memory 250. Display 220 is connected to I/O bus 210 by path 221 and includes a video driver and connected monitor for displaying information to a user. ~~Input~~ I/O device 230 is connected to I/O bus 210 via path 231 and is a keyboard and/or mouse attached to an appropriate driver for receiving input data from a user. Network interface 240 is connected to I/O bus 210 via path 241 and may be a modem, Ethernet device driver, or other type of communications interface that allows processing system 200 to communicate with another device, such as a second processing system. Non-volatile memory 250 is a device, such as a disk drive, connected to I/O bus 210 via path 251 and which can read and write data to a disk or other storage media to store the data for future use. Peripheral device 260 is any other device that may be connected to I/O bus 210 via path 261 to share data with CPU 201.